ORION TV-790

MODEL

SERVICE MANUAL

Service Notes

After a repair the cables must be laid out as originally fitted to save compliance with original approval and to avoid failures or disturbances.
The mains cable prevents interference from the mains supply and is part of the product approval. For replacement the original spare part only must be used.

Note di servizio

Dopo una riparazione i cavi devono essere disposti come posizionati all'origine per mantenere la corrispondenza con le approvazioni originali ed evitare guasti o disturbi.
Il cavo di alimentazione previene interferenze provenienti dalla rete elettrica ed è parte delle approvazioni del prodotto. Per la sostituzione deve essere utilizzato esclusivamente il ricambio originale.

Modifications reserved - Con riserva di modifiche

Professional 4400 Chassis service procedure

Power module

Use PP1 to select 154V ± 0.5V for 4:3 tubes and 151V ± 0.5V for 16:9 tubes at the CP28 terminals.

Activating service mode

1. Switch on the appliance while holding down the **MENU key at the cabinet controls** until the red LED lights up.

2. Release the MENU button at the cabinet and press the **standby** button on the remote control; the appliance will default to programme 1 or to AV1 if pin 8 of SCART 1 is connected to a voltage of +12 V. It is therefore important to make certain that the test signal needed to make the adjustments is available either on programme 1 or on the SCART 1 input, as selection of the sources is not possible thereafter in service mode.

3. The functions that can be adjusted (listed below) are selected using the **P+** and **P-** buttons of the remote control and the adjustments then made with the **Volume ±** buttons. It is advisable to make a note of initial values before making any changes so that these can be restored if necessary.

In the event of replacing the NVM memory or the microprocessor, it is essential to make all the adjustments accessible in service mode, since the replacement memory is supplied without any prior programming and a new microprocessor requires a new initialization.

Option bytes (Opx)

The correct values to set for each appliance are given on the label at the back cover alongside the letters **Op1**, **Op2**, **Op3**.

Initialization (INIT CTV 831 x.x)

The initialization procedure, which also indicates the software version for the microprocessor, is enabled with the **Volume +** button and **must be carried out whenever the NVM memory or the microprocessor is replaced. Bear in mind that initialization has the effect of erasing all data from the memory except for the bytes option.**

Control bytes (Cox)

These are control registers that **must be set** as follows:

Co2 96
Co3 27
Co4 00

Screen grid voltage (Vg2 Test)

Having selected the function, press the Volume+ button: a luminous horizontal line appears in the middle of the screen. Adjust potentiometer G2 on the EHT transformer so that the line is just visible (in a dimly lit room). Then press Volume- and **wait for a few seconds** until service mode is restored.

IF video setting (Ifxx AFCxx)

This adjustment requires special equipment and will be needed only for the ICC2 N1 version, which is also recognizable by the presence of the LC7 coil. If the coil is present, adjust IF and IFP to the values given on the label affixed to the left side of main PCB so that a suitable approximation is achieved.

If the coil is not present, adjust as follows:

IF 50
IFP 50 (this item is accessible **for multistandard appliances only**, provided that a France/AM/VHF-L mode signal is memorized in the programme 1 position).

AGC tuner setting (AG)
With a signal of 1 mV applied to the aerial input on a UHF channel, adjust to 4 Vdc at pin 1 of the tuner.

Setting the luminance/chrominance delay (Yx)
The delay must be adjusted to the following values:

Yp	18	(PAL)
Ys	30	(SECAM)
Yn	20	(NTSC)
Yo	22	(SCART)

The Yn function is only accessible if the signal is NTSC coded (**standard accepted only by SCART**).

Audio stereo A2 decoder (SA/LA)
The **SA** and **LA** functions allow adjustment of the separation between the right and left audio channels and of the respective levels. An RF stereo generator is therefore required. Disconnect modulation to the left hand channel and adjust LA to give 1.4 Vpp at pin 1 of the SCART 1 connector. Then adjust SA for the minimum residual signal at pin 3 of SCART 1. If a stereo generator is not available, set LA to 01 and SA to 0B to obtain a fair approximation.

Horizontal geometry (HSH/EW/PW/CP/TC)
There are two groups of these functions, one for 4:3 format (suffix 4) and one for 16:9 format (suffix 16), both of which must be adjusted because they are used in the zoom function (4:3 tubes included). The functions of the single parameters are as follows:

HSH	Horizontal shift
EW	Horizontal amplitude
PW	Parabola correction
CP	Corner parabola correction
TC	Trapezium correction

In the case of 4:3 format picture tubes, enter **EW16** = 3F to ensure proper zooming.

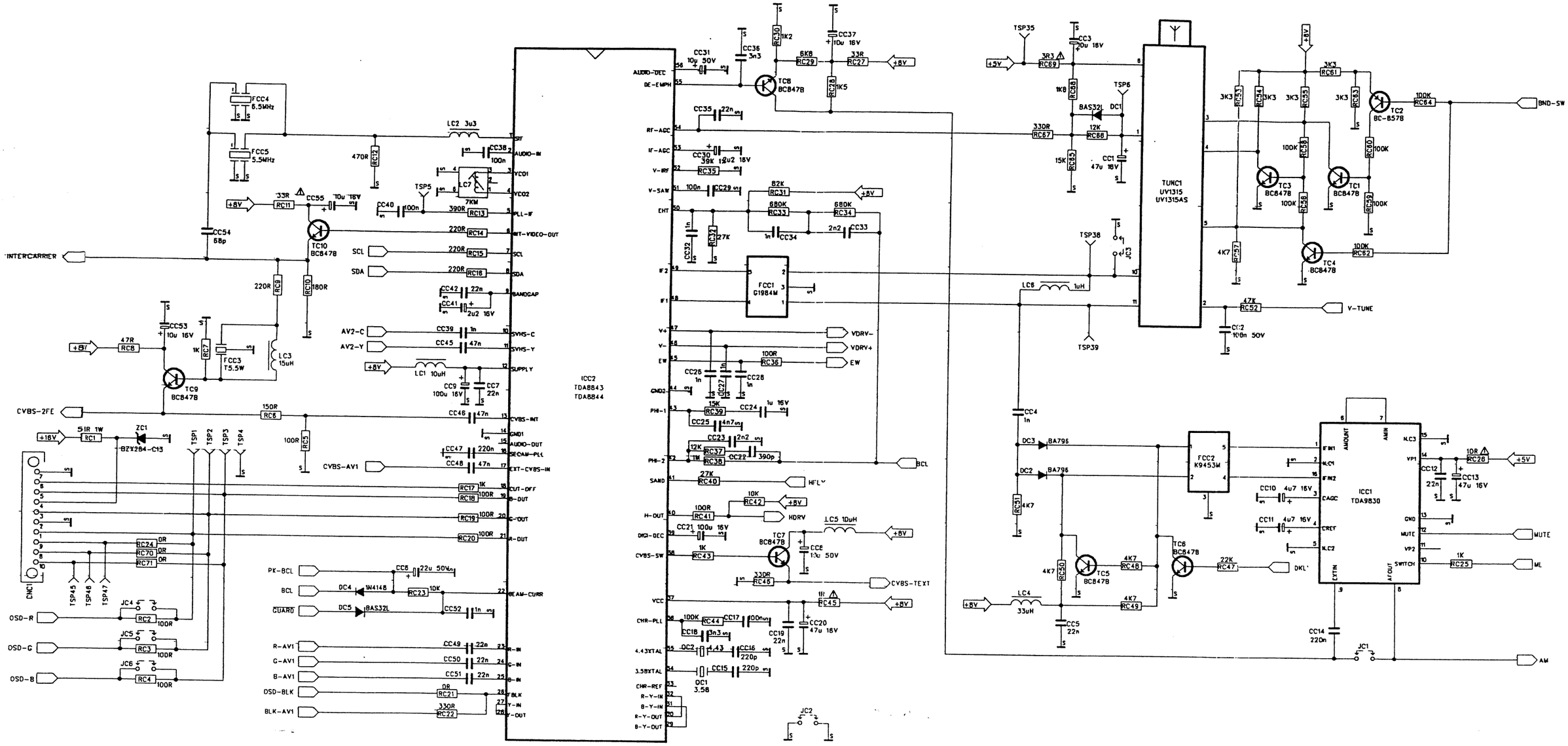
Vertical geometry (VS/VA/VSH/SC)
Vertical geometry is adjusted starting with the **VS** (vertical slope) function, which is set so that the central horizontal line of the test signal is exactly at the boundary between the visible image and the black part below and **must not then be changed again**. The functions of the single parameters are as follows:

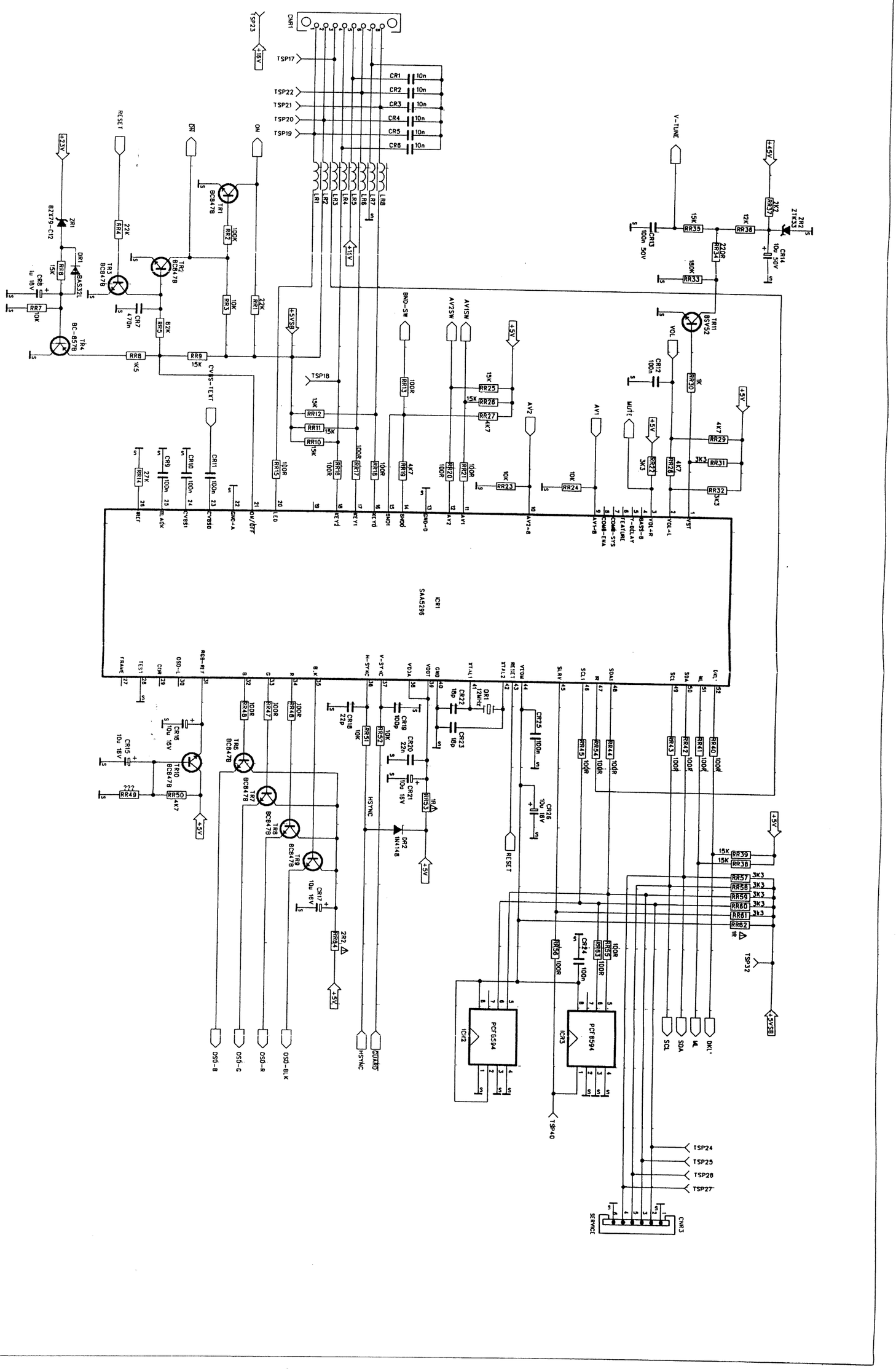
VS	Vertical slope
VA	Vertical amplitude
VSH	Vertical shift
SC	Vertical S-correction (linearity)

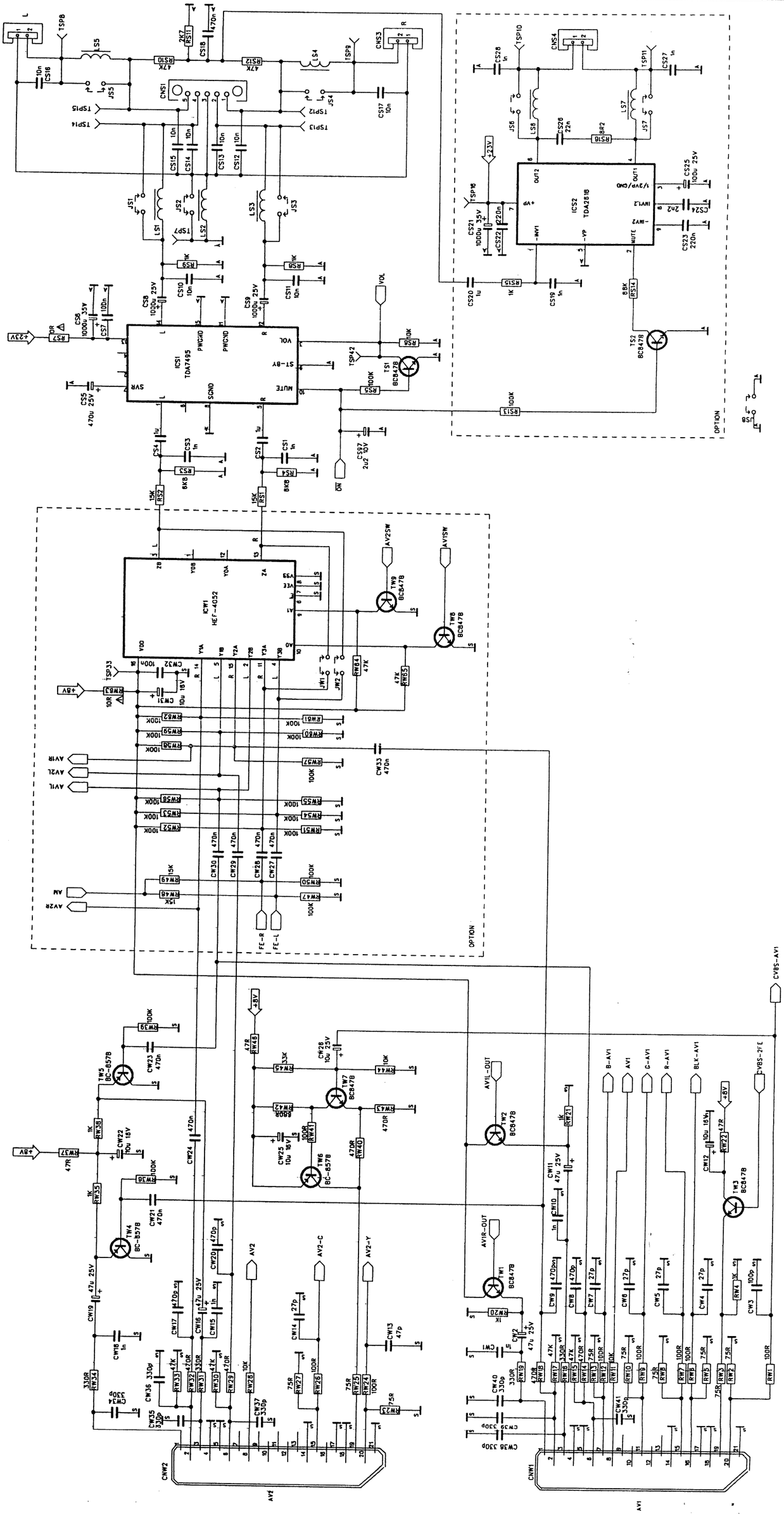
White control (WB/WG/WR)
Using a black and white bar signal, adjust to obtain a grey image.

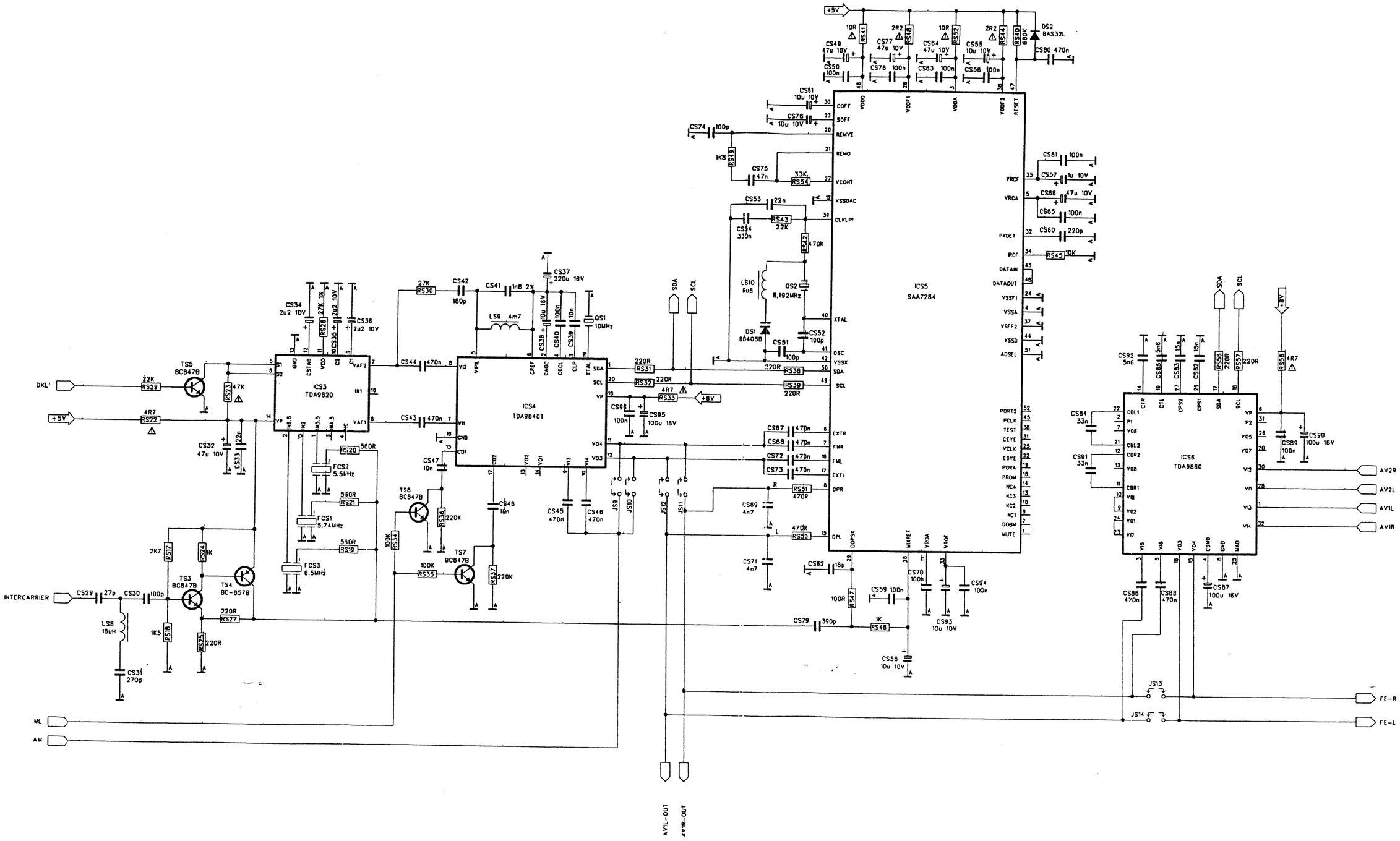
On screen (OSD)
Load the fixed value 3F.

Deactivating service mode
Once all the necessary adjustments have been made, press TV or MENU OFF on the remote control to save all the changes and return the appliance to normal operating mode.


ICC2
TDA8843
TDA8844
FCC4 6.5MHz
FCC5 5.5MHz
LC2 3u3
470R RC12
TSP5
LC7 7KM
+8V
33R RC11
CC55 10u 16V
CC54 68p
TC10 BC847B
INTERCARRIER
220R RC9
180R RC10
CC53 10u 16V
47R RC8
1K RC7
FCC3 T5.5W
LC3 15uH
TC9 BC847B
CVBS-2FE
150R RC6
100R RC5
5IR 1W RC1
ZC1 BZX284-C13
+16V
TSP1
TSP2
TSP3
TSP4
DNC1
TSP45
TSP46
TSP47
RC24 0R
RC70 0R
RC71 0R
JC4
JC5
JC6
RC2 100R
RC3 100R
RC4 100R
OSD-R
OSD-G
OSD-B
CC39 1n
CC45 47n
LC1 10uH
CC9 100u 16V
CC7 22n
CC46 47n
CC47 220n
CC48 47n
CVBS-AV1
RC17 1K
RC18 100R
RC19 100R
RC20 100R
CC42 22n
CC41 2u2 16V
SCL
SDA
220R RC14
220R RC15
220R RC16
CC40 100n
390R RC13
CC38 100n
AV2-C
AV2-Y
PK-BCL
BCL
GUARD
DC4 1N4148
DC5 BAS32L
CC6 22u 50V
RC23 10K
CC52 1n
R-AV1
G-AV1
B-AV1
OSD-BLK
BLK-AV1
CC49 22n
CC50 22n
CC51 22n
RC21 0R
RC22 330R
AUDIO-DEC
DE-EMPH
RF-AGC
IF-AGC
V-IRF
V-SAW
EHT
IF2
IF1
V+
V-
EW
GND2
PH-1
PH-2
SAND
H-OUT
DIGI-DEC
CVBS-SW
VCC
CHR-PLL
4.43XTAL
3.58XTAL
CHR-REF
R-Y-IN
B-Y-IN
R-Y-OUT
B-Y-OUT
CC31 10u 50V
CC36 3n3
RC30 1K2
6K8 RC29
33R RC27
CC37 10u 16V
TC8 BC847B
RC28 1K5
CC35 22n
CC30 39K 2u2 16V
RC35
CC29 100n
82K RC31
680K RC33
680K RC34
CC34 1n
2n2 CC33
CC32 1n
RC32 27K
FCC1 G1984M
VDRV-
VDRV+
EW
100R RC36
CC26 1n
CC27 1n
CC28 1n
15K RC39
CC24 1u 16V
CC25 4n7
CC23 2n2
12K RC37
1M RC38
CC22 390p
BCL
27K RC40
HFLY
10K RC42
+8V
HDRV
100R RC41
CC21 100u 16V
LC5 10uH
1K RC43
TC7 BC847B
CC8 10u 50V
33OR RC46
CVBS-TEXT
1R RC45
100K RC44
CC17 100n
CC18 3n3
CC19 22n
CC20 47u 16V
4.43 OC2
CC16 220p
CC15 220p
DC1 3.58
JC2
TSP35
+5V
CC3 10u 16V
3R3 RC69
1K8 RC68
BAS32L DC1
TSP6
330R RC67
12K RC66
15K RC65
CC1 47u 16V
TSP38
TSP39
LC6 1uH
TUNC1 UV1315 UV1315AS
4K7 RC57
47K RC52
CC2 10n 50V
V-TUNE
3K3 RC53
3K3 RC54
3K3 RC55
3K3 RC61
3K3 RC63
100K RC64
TC2 BC-857B
BND-SW
100K RC56
100K RC58
100K RC60
TC3 BC847B
TC1 BC847B
100K RC59
TC4 BC847B
100K RC62
CC4 1n
DC3 BA795
DC2 BA795
FCC2 K9453M
4K7 RC51
4K7 RC50
TC5 BC847B
4K7 RC48
4K7 RC49
TC6 BC847B
22K RC47
DKL'
LC4 33uH
CC5 22n
ICC1 TDA9830
AMOUNT
AMIN
IFIN1
N.C1
IFIN2
CAGC
CREF
XLC2
CXTIN
AFOUT
N.C3
VP1
GND
MUTE
VP2
SWITCH
CC10 4u7 16V
CC11 4u7 16V
CC12 22n
CC13 47u 16V
10R RC26
CC14 220n
JC1
AM
MUTE
ML
1K RC25


CNR1
TSP17
TSP22
TSP21
TSP20
TSP19
TSP18
TSP23
+18V
CR1 10n
CR2 10n
CR3 10n
CR4 10n
CR5 10n
CR6 10n
LR1
LR2
LR3
LR4
LR5
LR6
LR7
LR8
+15V
+5VSB
+5V
+23V
RESET
OSN
ON
TR1 BC847B
TR2 BC847B
TR3 BC847B
TR4 BC-857B
ZR1 BZX79-C12
DR1 BAS32L
RR1 22K
RR2 100K
RR3 10K
RR4 22K
RR5 82K
RR6 15K
RR7 10K
RR8 1K5
RR9 15K
CR7 470n
CR8 1u 18V
CVBS-TEXT
V-TUNE
+45V
RR37 2K2
ZR3 ZTK33
CR14 10u 16V
CR13 100n 50V
RR35 15K
RR38 12K
RR34 220R
RR33 180K
TR11 BSV52
VOL
CR12 100n
RR30 1K
MUTE
RR29 4K7
RR31 3K3
RR28 4K7
RR32 3K3
RR27 3K3
RR24 10K
RR23 10K
AV1
AV2
AV1SW
AV2SW
BND-SW
RR25 15K
RR26 15K
RR27 4K7
RR13 100R
RR19 4K7
RR21 100R
RR20 100R
RR18 100R
RR17 100R
RR16 100R
RR15 100R
RR12 15K
RR11 15K
RR10 15K
CR11 100n
CR10 100n
CR9 100n
RR14 27K
CR22 18p
CR23 18p
QR1 12MHz
CR18 22p
CR19 100p
CR20 22n
CR21 10u 16V
RR51 10K
RR52 10K
RR53 1K8
DR2 1N4148
CR25 100n
CR26 10u 18V
CR15 10u 16V
CR16 10u 16V
RR49 222
RR50 4K7
TR10 BC847B
TR6 BC847B
TR7 BC847B
TR8 BC847B
TR9 BC847B
CR17 10u 16V
RR48 100R
RR47 100R
RR46 100R
RR45 100R
RR44 100R
RR54 100R
RR43 100R
RR42 100R
RR41 100R
RR40 100R
RR39 15K
RR38 15K
RR57 3K3
RR58 3K3
RR59 3K3
RR60 3K3
RR61 3K3
RR62 1K
RR55 100R
RR63 100R
RR56 100R
CR24 100n
ZR2 RR64
IC1 SAA5298
IC12 PCF8594
IC13 PCF8594
IC14 PCF8594
VOL-L
VOL-R
BASS-B
TREBLE
V-DELAY
COMB-SYS
COMB-ENA
AV1-B
AV2-B
BND-D
BND1
BND2
AV2
AV1
RCT-D
RCT1
RCT2
LCO
CVBS
CVBS1
BLACK
RGB
CVBS-A
CVBS-B
CVBS-C
CVBS-D
OSD-L
CDR
TEST
FRAME
RGB-BLK
R
G
B
BLK
H-SYNC
V-SYNC
VDDA
VDDT
GND
XTAL1
XTAL2
VTUN
RESET
SLAVE
SDA1
IR
SCL1
INT.
ML
SDA
SCL
DKL.
+32VSB
TSP12
TSP40
TSP24
TSP25
TSP26
TSP27
CNR3
SERVICE
OSD-B
OSD-G
OSD-R
OSD-BLK
HSYNC
COLRO


CNS2
TSP8
LS5
CNS3
TSP9
LS4
CNS1
TSP15
TSP14
TSP12
TSP13
JS5
JS4
JS1
JS2
JS3
LS1
LS2
LS3
TSP7
IC51
TDA7495
PWGND
SGND
VOL
ST-BY
MUTE
SVR
TS1
BC8478
TSP42
VOL
ON
OPTION
CNS4
TSP10
TSP11
LS8
LS7
JS8
JS7
IC52
TDA2818
OUT2
OUT1
+VP
-VP
MUTE
TSP16
+23V
OPTION
IC W1
HEF-4052
AV2SW
AVISW
TW9
BC8478
TW8
BC8478
TSP33
+8V
AV1R
AV2L
AV1L
AV2R
AV
FE-R
FE-L
OPTION
TW5
BC-857B
TW7
BC8478
TW6
BC-857B
TW4
BC-857B
AV2
AV2-C
AV2-Y
AV1L-OUT
TW2
BC8478
AV1R-OUT
TW1
BC8478
TW3
BC8478
CVBS-AV1
B-AV1
AV1
G-AV1
R-AV1
BLK-AV1
CVBS-2*E
CNW2
CNW1
AV2
AV1

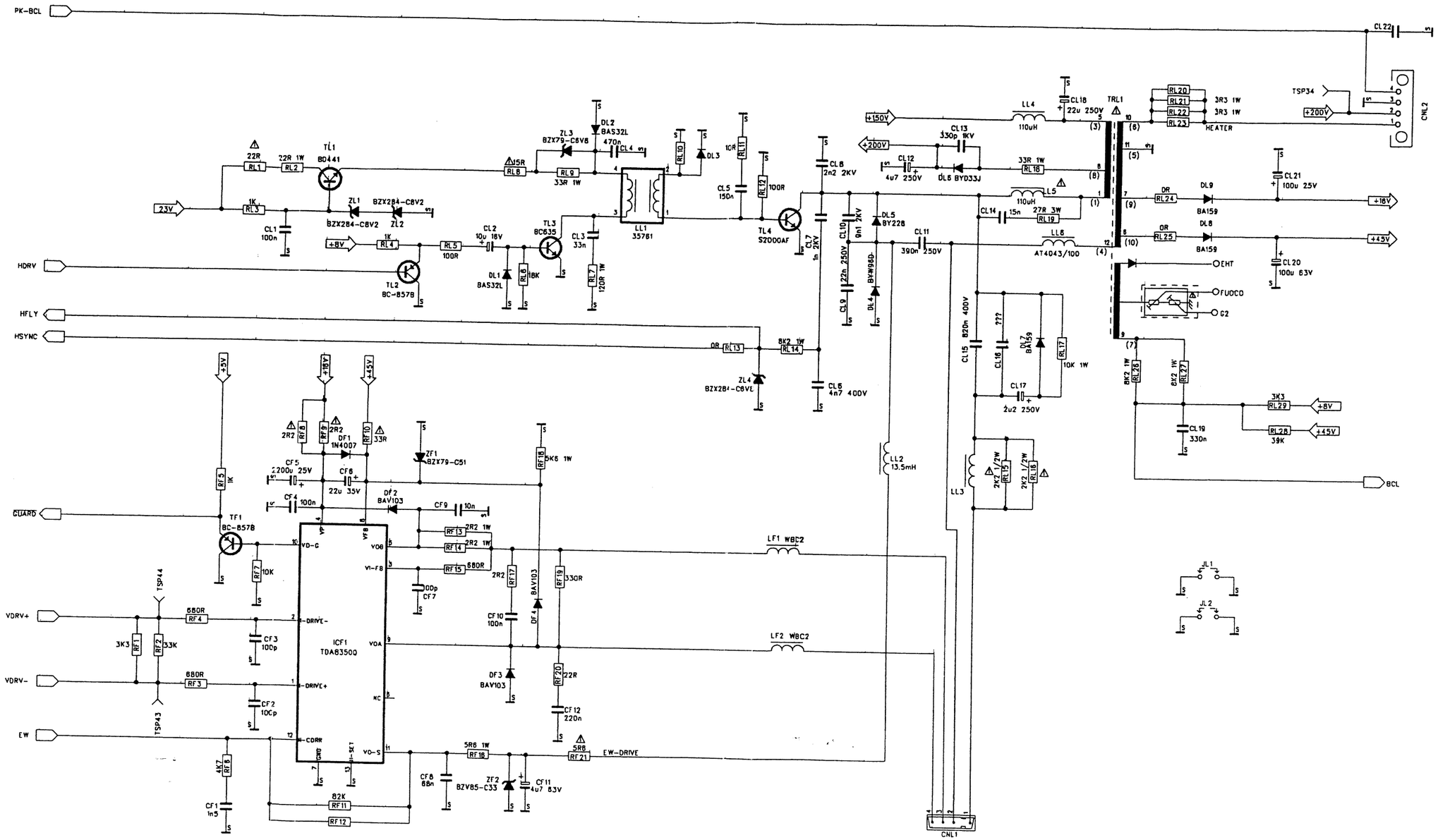

+5V
DKL'
22K RS29
4R7 RS22
TS5 BC847B
47K RS23
CS32 47u 10V
CS33 22n
ICS3 TDA9820
CS34 2u2 10V
CS35 2u2 10V
CS36 2u2 10V
27K RS30
CS42 180p
CS41 1n8 2%
LS9 4m7
CS37 220u 16V
CS38 10u 16V
CS40 100n
CS39 10n
QS1 10MHz
CS44 470n
CS43 470n
ICS4 TDA9840T
CS47 10n
CS46 10n
CS45 470n
CS48 470n
JS9
JS10
560R RS20
FCS2 5.5MHz
FCS1 5.74MHz
FCS3 6.5MHz
580R RS21
580R RS19
TS8 BC847B
100K RS34
220K RS36
TS7 BC847B
100K RS35
220K RS37
2K7 RS17
1K RS24
TS3 BC847B
TS4 BC-857B
INTERCARRIER
CS29 27p
CS30 100p
LS8 18uH
1K5 RS18
220R RS25
220R RS27
CS31 270p
ML
AM
SDA
SCL
220R RS31
220R RS32
4R7 RS33
+8V
CS96 100n
CS95 10u 16V
JS12
JS11
AVL-OUT
AVR-OUT
ICS5 SAA7284
10R RS41
2R2 RS48
10R RS52
2R2 RS44
680K RS40
DS2 BAS32L
CS49 47u 10V
CS77 47u 10V
CS64 47u 10V
CS55 10u 10V
CS80 470n
CS50 100n
CS78 100n
CS63 100n
CS58 100n
CS81 10u 10V
CS76 10u 10V
CS74 100p
1KB RS49
CS75 47n
33K RS54
CS53 22n
CS54 330n
RS43 22K
RS42 470K
LS10 6uB
DS1 BB405B
OS2 8,192MHz
CS51 100p
CS52 100p
220R RS38
220R RS39
CS87 470n
CS88 470n
CS72 470n
CS73 470n
R RS51 470R
CS89 4n7
470R RS50
L
CS71 4n7
CS62 18p
CS59 100n
100R RS47
CS79 390p
1K RS46
CS70 100n
CS93 10u 10V
CS94 100n
CS58 10u 10V
CS81 100n
CS57 1u 10V
CS86 47u 10V
CS85 100n
CS60 220p
RS45 10K
VRCF
VRCA
PKDET
IREF
DATAIN
DATAOUT
VSSF1
VSSA
VSFF2
VSSD
ADSEL
PORT2
PCLK
TEST
CCYE
VCLK
ESYE
PORA
PROM
NC4
NC3
NC2
NC1
DOBM
MUTE
ICS6 TDA9860
CS92 5n6
CS85 5n6
CS83 15n
CS82 15n
RS56 220R
RS57 220R
RS58 4R7
CS84 33n
CS91 33n
CS90 100u 16V
CS89 100n
CS86 470n
CS88 470n
CS87 100u 16V
AV2R
AV2L
AV1L
AV1R
JS13
JS14
FE-R
FE-L

PRIMARY GROUND
CAUTION NO MAINS VOLTAGE SEPARATION IN THIS AREA

TSP29
CP2 2n2 1KV
DP2 1N4007
DP3 1N4007
CP4 2n2 1KV
DP1 1N4007
DP4 1N4007
68K 2W RP2
CP3 220n
RP1 1M
LP1
CP1 220n 275V
FP1 T2,5AH
PTC1
CP5 68n 250VAC
CNP1
CNP2
TSP36
TSP37

DP5 BYW95B
JP1
JP2
NTC1
22R 10W RP13
22R 10W RP14
DP6 BYW95B
DP7 BYW95B
CP13 2n2 1KV
CP14 2u2 385V
CP15 150u 385V
220K 1W RP15
CP16 100n 400V
RP16 27K 9W
TRP1
CP17 10n 1KV
DP9
RP17
CP7 220u 16V
DP8
BA159
DP16 BAV103
DP10 BA159
DR RP18
RP11 10K
TP1 BD441
RP12 10R 1/2W
ZP1 BZX79-C13
CP18 220u 63V
DP11 BYT11-1000
LP2
CP19 680p 1KV
CP12 470n
TEA2262 ICP1
RP7 22R
RP9 22R
CP8 33n
5608 RP5
CP9 1u
CP10 1u
CP11 1n
RP8 33K
RP10 4K7
TP2 STP4NA80
1K RP6
R15 3W RP19
RP3
CP6 1n
RP4 2K2
CP38
4K7 RP20
CP39
ICP2 TCDT1101CB
ZP2 BZX284-C8V2
8K2 11W RP22
+150V
CP21 470n
TP3 BC847B
5K1 RP25
1K PP1
ZP3 BZX284-C8V2
RP23 33K
RP24 33K
56K RP26
+150V
CP22 330p 1KV
CP42 4u7 250V
4M7 VR88 RP21
CP20 2n2 4KV
TSP30
TSP31
JP6
JP7

TSP28
LP4
LP3
DP12 BYW95C
CP40 150p 2KV
CP25 330p 1KV
CP41 330p 1KV
CP26 100u 250V
RP30 100K
+150V
FP4 T2,5AH
JP3
LP5
DP13 BYW29
CP27 330p 1KV
CP28 1000u 35V
LP6 110uH
CP29 100u 35V
JP8
RP35 2R2
23V
+23V
23V
ICP3 TDA8133
FP3 T2,5AH
JP4
LP8
CP30 330p 1KV
DP14 BYW95B
CP31 1000u 25V
FP2 T2,5AH
JP5
LP7
DP15 BA159
CP32 330p 1KV
CP33 1000u 16V
TSP41
CP35 47u 16V
+5VSB
+8V
47K RP33
4K7 RP34
CP37 47u 16V
RESET
TP5 BC847B
+5V
RP32 150R
RP31 470R
TP6 BD441
CP36 47u 10V
CP24 100n
47K RP29
TP4 BC847B
100R RP27
15K RP28
CP23 220u 16V
ON


PK-BCL
HDRV
HFLY
HSYNC
GUARD
VDRV+
VDRV-
EW
23V
+8V
+5V
+16V
+45V
+150V
+200V
TL1 BD441
TL2 BC-857B
TL3 BC635
TL4 S2000AF
TF1 BC-857B
ZL1 BZX284-C8V2
ZL2 BZX284-C8V2
ZL3 BZX79-C8V8
ZF1 BZX79-C51
ZF2 BZV85-C33
ZL4 BZX284-C8V2
DL1 BAS32L
DL2 BAS32L
DL3
DL4 BYW96D
DL5 BY228
DL6 BYD33J
DL7 BA159
DL8 BA159
DL9 BA159
DF1 1N4007
DF2 BAV103
DF3 BAV103
DF4 BAV103
LL1 35781
LL2 13.5mH
LL3
LL4 110uH
LL5 110uH
LL6 AT4043/100
TRL1
ICF1 TDA8350Q
LF1 WBC2
LF2 WBC2
CNL1
CNL2
TSP34
TSP43
TSP44
HEATER
EHT
FUOCO
G2
BCL
EW-DRIVE
JL1
JL2

8

Spare parts list
Ersatzteilliste

Chassis Professional 4400

Ref.	Part No.		
Pos.	ET-Nr.	Description	Bezeichnung
	S030242209	Condensator 220 nF 250 VAC	Kondensator 220 nF 250 VAC
	S040590509	Condensator 4,7 UF 250 V	Kondensator 4,7 UF 250 V
	S040601009	Condensator 100 UF 250 V	Kondensator 100 UF 250 V
	S040779229	Condensator 2,2 UF 385 V	Kondensator 2,2 UF 385 V
	S040781509	Condensator 150 UF 385 V	Kondensator 150 UF 385 V
	S044010109	Fusible resistor 1 Ohm	Sicherungswiderstand 1 Ohm
	S044010479	Fusible resistor 4,7 Ohm	Sicherungswiderstand 4,7 Ohm
	S044011009	Fusible resistor 10 Ohm	Sicherungswiderstand 10 Ohm
	S044011509	Fusible resistor 15 Ohm	Sicherungswiderstand 15 Ohm
	S044013309	Fusible resistor 33 Ohm	Sicherungswiderstand 33 Ohm
	S047501009	Fusible resistor 1 Ohm SMD	Sicherungswiderstand 1 Ohm SMD
	S047502209	Fusible resistor 2,2 Ohm SMD	Sicherungswiderstand 2,2 Ohm SMD
	S047504709	Fusible resistor 4,7 Ohm SMD	Sicherungswiderstand 4,7 Ohm SMD
	S047510009	Fusible resistor 10 Ohm SMD	Sicherungswiderstand 10 Ohm SMD
	S048002209	Fusible resistor 2,2 Ohm	Sicherungswiderstand 2,2 Ohm
	S048222009	Fusible resistor 2,2 KOhm	Sicherungswiderstand 2,2 KOhm
VR37	S053051009	Safety resistor 1 MOhm VR37	Sicherheitswiderstand 1 MOhm VR37
	S053210709	Safety resistor 4,7 MOhm VR6B	Sicherheitswiderstand 4,7 MOhm VR6B
	S053910279	Wire wound resistor 27 Ohm 3W	Drahtwiderstand 27 Ohm 3W
	S054000159	Wire wound resistor 0,15 Ohm 3W	Drahtwiderstand 0,15 Ohm 3W
	S054368009	Resistor 68 KOhm 2W	Widerstand 68 KOhm 2W
	S055492279	Wire wound resistor 27 KOhm 9W	Drahtwiderstand 27 KOhm 9W
	S055610829	Wire wound resistor 8,2 KOhm 11W	Drahtwiderstand 8,2 KOhm 11W
	S058590209	NTC resistor 4,7 Ohm	NTC Widerstand 4,7 Ohm
	S058591909	PTC resistor 20 A	PTC Widerstand 20 A
	S061281059	Diode BAV 103-GS18	Diode BAV 103-GS18
	S061284619	Diode BA 159	Diode BA 159
	S061296509	Diode BB 405B,153	Diode BB 405B,153
	S061299009	Diode BYT 11-1000	Diode BYT 11-1000
	S061300509	Diode BYW 29/200	Diode BYW 29/200
	S061302409	Diode BYW 95B	Diode BYW 95B
	S061302609	Diode BYW 95C	Diode BYW 95C
	S061303209	Diode BYW96D	Diode BYW96D
	S061316879	Diode BY228	Diode BY228
	S061401339	Diode BYD33J	Diode BYD33J
	S061517929	Diode BA792/T1	Diode BA792/T1

Ref.	Part No.		
Pos.	ET-Nr.	Description	Bezeichnung
	S061706209	Zener diode BZX284-C6V2,115	Zener Diode BZX284-C6V2,115
	S061706809	Zener diode BZX284-C6V8,116	Zener Diode BZX284-C6V8,116
	S061961709	Zener diode BZV85C33	Zener Diode BZV85C33
	S061971619	Zener diode 6,8 V	Zener Diode 6,8 V
	S061972019	Zener diode 12 V	Zener Diode 12 V
	S061972059	Zener diode 13 V	Zener Diode 13 V
	S062520309	Transistor BC635-16	Transistor BC635-16
	S062531009	Transistor BD441	Transistor BD441
	S062620009	Transistor BSV52,215	Transistor BSV52,215
	S062756109	Transistor S2000AF	Transistor S2000AF
	S062756509	Transistor STP4NA80 FI	Transistor STP4NA80 FI
	S063164529	IC TBA2262	IC TBA2262
	S063174959	IC TDA7495	IC TDA7495
	S063181339	IC TDA8133	IC TDA8133
	S063183509	IC TDA8350Q/N5	IC TDA8350Q/N5
	S063188449	IC TDA8844/N1Pal/Secam	IC TDA8844/N1Pal/Secam
	S063188439	IC TDA88431N1 Pal	IC TDA88431N1 Pal
	S063198219	IC TDA9821-V1	IC TDA9821-V1
	S063198309	IC TDA9830-V1	IC TDA9830-V1
	S063198609	IC TDA9860/V2	IC TDA9860/V2
	S063241339	IC ZTK33-8	IC ZTK33-8
	S063285939	IC PCF8594C-2P/02	IC PCF8594C-2P/02
	S063352979	IC SAA5297PS/065	IC SAA5297PS/065
	S063372849	IC SAA7284ZP/M2	IC SAA7284ZP/M2
	S063411019	IC TCDT1101GB	IC TCDT1101GB
	S063598409	IC TDA9840T/V2,118	IC TDA9840T/V2,118
	S065621409	Flyback transformer 110	Zeilentrafo 110
	S065708009	Power switch transformer	Trafo Schaltnetzteil
	S066541709	Line filter	Netzfilter
	S066544009	Line drive transformer	Trafo H-Treiber
	S066900159	Quarz 3,58 MHZ	Quarz 3,58 MHZ
	S066900259	Quarz 4,43 MHZ	Quarz 4,43 MHZ
	S066900369	Quarz 8,192 MHz	Quarz 8,192 MHz
	S066900409	Quarz 10 MHz	Quarz 10 MHz
	S066901209	Quarz 12 MHz	Quarz 12 MHz
	S067071009	E/W Coil	Ost/West Spule
	S067081009	Bridge coil	Brückenspule
	S067081419	Linearity coil	Linearitätsspule
	S069023109	Tuner UV 1315 AS	Tuner UV 1315 AS
	S087170009	Chassis holder side	Chassishalter Seite
	S087170509	Chassis holder front	Chassishalter Front
	S087174409	Chassis rear connector cover	Buchsenplatte

Ref.	Part No.		
Pos.	ET-Nr.	Description	Bezeichnung
	S000674409	CRT PCB CPL.	BR-Platine kpl.
	S035931019	Condensator 10 nF 1000 V	Kondensator 10 nF 1000 V
	S040590229	Condensator 2,2 UF 250 Y	Kondensator 2,2 UF 250 Y
	S047033009	Fusible resistor 33 Ohm	Sicherungswiderstand 33 Ohm
	S062740869	Transistor BF 871	Transistor BF 871
	S063151019	IC TEA5101B	IC TEA5101B
	S070001209	CRT socket	Bildröhrensockel

Spare parts list
Ersatzteilliste

TV 790

Chassis Professional 4400

Ref.	Part No.		
Pos.	ET-Nr.	Description	Bezeichnung
	S000544009	Main PCB 4400 cpL.	Grundchassis 4400
	S000844429	Manuals controls PCB cpl.	Bedienteil kpl.
	S062000409	LED diode red/green	LED rot/grün
	S068055319	Mains switch	Netzschalter
	S068056309	Pusch EKPT 1105 S	Schalter EKPT 1105 S
	S068149109	IR receiver TFMS 5360	IR Empfänger TFMS 5360
	S071015359	Earphone jack	Kopfhörerbuchse
	S078971009	Manuals controls holder	Halter Bedienteil
	S000848019	Door	Door
	S082811459	Door holdor	Halter Door
	S083307109	Mains switch button	Knopf Netzschalter
	S007805719	Cabinet front	Gehäusefront
	S087128009	Cabinet bottom	Gehäuseboden
	S080157009	Back cover	Rückwand
	S060328029	CRT 28" A66EAK071X01	Bildröhre 28" A66EAK071X01
	S067202119	Degauss coil	Entmagnetisierungsspule
	S068244009	Remote control	Fernbedienung
	S073174009	Speaker 8 Ohm	Lautsprecher 8 Ohm